

Pass Laboratories Xs Phono Review

By: Constantine Soo | January 2018



The Pass Laboratory Xs Phono arrived after I have wrapped up my review of the Hartvig TT turntable system with the Ikeda IT-345CR1 tonearm and the 9TT moving-coil cartridge. The phono stage at that time was the Pass Labs XP-25, a \$10,600, two-chassis phono stage that raised the splendor of vinyl playback to such heights that first informed me of the encouraging progress in state-of-the-art vinyl playback in this mature age of digital. It was the XP-25 that spurred me on to taking a more serious look at vinyl playback. The subject of this review is the Xs Phono, the only higher model in the company's products to the XP-25.

The Pass Labs Xs Phono comes in two large chassis, and together with the identical twin-chassis of the accompanying Xs Preamplifier, signify a major presence in my system. But as designer Wayne Colburn explains in his Technical Background article, the XS is the result of an intensive exercise in product design, employing rocket science-grade gold plated circuit boards for long-term operational stability and hyper sensitivity for the feeble signals to pass through. Not only is the XS main chassis endowed with 13 of these massive, space age circuit board with 1,500 parts, and doubled up in dual-mono pairs, a whole contingent of toroidal transformers and stages of regulations fills up the separate power supply chassis. Pass Labs products are not known for being space saving, although its powerful INT-250 integrated is a different story, and for another time.

The two chassis of the Xs Phono are interconnected via a pair of umbilical cords for the dual-mono operation, and this accords the user considerable freedom in separate placements. I have noticed better tonal definition and spatiality when separating the two chassis than stacking the main chassis on top of the power supply. Still, for space-saving measures, I stacked the main chassis of the accompanying \$38,000 Xs Preamplifier on top of that of the Xs Phono. Since both are main chassis that house each system's control circuits but not the processing plant of power supplies, they pose no performance impediment issue to one another. The power supplies chassis for the phono stage and the line stage preamplifier are in different spots of the room, and no operating electronics are put atop either.

Reviewed with the Xs Phono is Allen Perkin's \$18,000 Spiral Groove Revolution turntable system with the \$6,000 Centroid tonearm. Together with the Xs Preamplifier, the Pass Labs Xs Phono drove a pair of the company's \$45,000, pure class A, XA-200.8 monoblock amplifiers. A pair of \$30,000 Technical Audio Device Evolution One floorstanders and \$21,650 Sound Lab Ultimate 545 electrostatic panel speakers alternated with the Pass Labs monoblocks. A pair of \$30,000 Bricasti Design M28 monoblock amplifiers also saw heavy duties.



A complete suite of MIT Cables Oracle series of cable system was in place, including the MA-X2 RCA interconnect for phono, MA-X SHD XLR for linking Xs Phono to Xs Preamplifier, and Xs Preamp to the XA-200.8 monoblocks, or the Bricasti Design M28. The MIT Cables Oracle Matrix Super HD 120 speaker interface drove the speakers. In the case of the TAD Evolution One, the jumper cables were the Audio Reference Technology jumper cables. Cartridges used were the Fuuga, Audio Note Io I Red and Soundsmith Paua II.

The Xs Phono provided three easy-access, large round knobs on the front for IMPEDANCE, CAPACITANCE and GAIN. Of all phono preamps I've used, the Xs Phono had proven to be the easiest to operate. Adjustments on moving-coil cartridges rest in the IMPEDANCE settings primarily, with a range from 30 to 47k Ohms. Capacitance adjustments were available from 100 to 750 pF, although changes had no effect on moving-coil cartridges. Since I didn't have moving-magnets among my cartridges, I can't report on the sound of the phono stage via changes in capacitance setting.

The GAIN circuit provided for 56, 66 and 76 dB of output and I have found the highest, 76dB setting to be perfect for all three cartridges. The Xs Phono had three pairs of RCA inputs in the back and one pair of RCA and XLR outputs. Six small, push buttons lined up towards the right of the front chassis that controls INPUT 1, 2, 3, and then SAVE, HIGH PASS FILTER and MUTE. The HIGH PASS FILTER cut off signals below 20 Hz. Many a time the features of high and low pass filters are present on budget phono stages for use in budget turntable systems, and I thought it bizarre to assume Pass Labs patrons spending \$45,000 on the Xs Phono and expensive cartridges would be using the system to play warped records, probably poorly kept with massive levels of subsonic, thus needing the filtering. Kudos to the wisdom of Pass Labs, for before long I started to dig out archaic favorite albums of mine, although none of them required the filtering. The Xs Phono can memorize individual settings on each of the inputs, which is useful for reviewing purposes.

Blue LEDs are built into each change segment of the three large knobs as well as above the push-buttons, though the minimal brightness suggests close proximity operation is expected. The Audiodesksysteme Glass Vacuum Vinyl Cleaner assured me of the quality of my vinyl experience by providing the quietest and least blemish record playback.



All three cartridges required the highest gain of 76 dB from the Xs Phono; the Fuuga outputted at 0.35 milliwatts peak-to-peak, the Audio Note Io I Red at 0.05 mV and the Soundsmith Puaa II at 0.4 mV. I noticed both the Sound Lab Ultimate 545 and TAD Evolution One exhibited hiss and hums regularly from other phono stages at various levels whereas the Xs Phono was completely noise-free. Just as the Xs Phono was quieter than its smaller sibling, it also proved itself a more compatible equipment with the supremely resolving and coherent MIT Cables Oracle cable system.

In terms of performance, the \$9,000 Fuuga demonstrated comparable clarity and delicacy against a few costly designs that I auditioned, which be quite mechanical sounding and too analytical even for the analog format. The £1,391.50 Audio Note Io I (US\$1,870 as of 12/14/2017) and the \$3,999.95 Soundsmith Puaa II are extraordinary crafts in their respective price ranges and packing class-leaping performances. All three were auditioned during this review.

Up until 2006, I had been acquiring records in a steadier pace. For a while, I endeavored to tread outside my comfort zone of recordings from mainstream classical labels and collect as many audiophile-grade recordings as I could and soon realized that with the exception of Angel 45, Living Stereo, Reference

Recordings and the now-defunct Telarc, I often found audiophile-grade classical performances released by independent labels artistically inadequate. My focus returned to sealed, NOS Deutsche Grammophon records of the 70s and 80s, which were to, one day, take the place of the much-played original ones in my collection on a final high-end analog turntable system. With the Spiral Groove Revolution in my system, the time to break the seals on those LPs had come.

By virtue of separation of the power supplies from the main, control and signal processing chassis, electrical noises in the XS were revealed to be completely eradicated, reproducing the most differentiating instrument tonalities. This culminated in the most thorough achievement in amplifying the precious signal retrieved by the Spiral Groove Revolution turntable system with the most transparent implementation of the RIAA equalization I've heard in the solid-state design. Chopin solo pianos in the hands of Maurizio Pollini, Beethoven sonatas by Wilhelm Kempff and many others are reproduced in the most exuberant tonalities I've heard. The solo piano was revitalized and reaffirmed as the audiophile reference standard by the XS. No other single instruments possess as complex and contrasting a tone as the piano, and the XS gave the cartridges' treatment of the sound the highest level of differentiation.



I've auditioned a few expensive phono stages prior to the Pass Labs Xs Phono, and the dynamic contrasting of the XS was the finest and most elaborately implemented that I've heard. In between the output levels of most phono stages, I despaired to find one that provides gain for more climactic passages and a little pull-back for the adagios. The XS was the first to demonstrate such highly intelligent and accommodating ability, enacting a most lifelike music making exercise where the adagios were preserved in their expansive sonority, not rendered lackluster, while alternating with the impending crescendos with no compression. It's about time we had a supremely quiet phono stage capable of this.

In addition, the XS accorded such contrasting dynamics that the whispery pianissimos for once needed not be turned up and would remain audibly resplendent with the most vivid, lifelike realism, thus preserving the most natural dynamics in vinyl playback of classical pianos I've experienced. Dynamics and tones of the performances, where it was mundane and dull, were now vibrant and engaging through the XS.

The XS breathed new life into regular staples in symphonies, too. The Beethoven Fifth by Carlos Kleiber with the Vienna Philharmonic was renewed with a new sense of festivity and urgency, opening a window never existed before into the prowess and state of mind of the composer as realized by the conductor. The scaling of brass sections is trailed meticulously by the Xs Phono in an epic show of varying tonalities of horns, trombones and trumpets. The XS accorded the sound of the Vienna Philharmonic with unprecedented portraits of gentleness amidst sweeping dynamics and prowess. Whereas the maestro sculpted the musical coherency of the ensemble, it was the Xs Phono that fulfilled his vision before the listener.

The superiority of the XS in preserving and liberating the miniscule phono signal over that of the XP-25 was more spectacularly evident in playing audiophile-grade records cut at 45 rpm, such as the Angel 45 Series. Whereas the enhanced dynamics and spectral extensions are the popular traits of the format on any turntable systems, the XS conjured a denser and grander portrayals of strings and brassy, a more powerful contrasting of dynamics and a haunting spatiality that was just that little bit better than that of the XP-25 and making all the difference in the world. Another 45 rpm disk, the 1977 RCA High Fidelity Master Series release of the Beethoven "Appassionata" piano sonata, played on a Borsendorfer Imperial and cut in 45 rpm, exemplified the XS' capability in the captured tonal sonority and unrelenting dynamics. It provided some of the most satisfying listening sessions. In closing, Pass Laboratories is known primarily for making amplifiers, although Nelson Pass, the company's founder and Wayne Colburn, the company's designer, have shown their creative prowess time and again.

In addition to First Watt, Nelson's own hobbyist production arm within Pass Labs that offers low-powered, budget but sonically overachieving amplifications, he and Wayne continue to explore new concepts in crossover networks and loudspeaker systems. The discontinued, fully active Rushmore 4-way loudspeaker system and the SR1 were two stellar examples of what the company did in response to international dealerships' requests for Pass Labs loudspeaker systems. The company's most recent example in industry collaboration is an active crossover named, PAP-C1, created for Ze'ev Schlik's PureAudioProject open-baffle Quintet 15 Horn1 loudspeaker system. Pass Labs ventured into the digital realm once in the late nineties and the result was the highly coveted D1 DAC. If the company were to revisit the D1, I'm confident it would go the PSU separation route. For the top products in the company's lineup in the XS series all are given the PSU separation treatment, including the Xs Phono. Putting the power supplies in a separate chassis is an expensive proposition and a market positioning goal more readily benefitting companies with solid financial standing. Small companies opting to go the chassis separation route risk dispensing with tremendous energy and resources for a product that, if not a bestseller, may not help the company in recovering the costs and creating a more secured financing standing. It is evident that Nelson Pass, the company's founder and his team would go as far as technology and their creativity will allow in creating products of value, dispensing hundreds of thousands of dollars in R&D and yet will not spend a dime more on unnecessary extravagance, such as knobs, mirror-like polished surfaces, ultra-luxurious handheld remote, etc. And it was not for lack of resources.

Digital remastering of recordings from the sixties and on often sounded not as open as the analog original when processed by the XS, which beckons the question as to the type of audiophiles spending \$45k on a phono stage and perhaps another \$38k on the companion line stage. He/she must be, of course wealthy but also a heck of a discerning music lover, because he/she is not satisfied with the ordinary reproduction of the music in his collection. Rather, he wants to experience the music in the most realistic way as presented by the most advanced thinking in modern technologies. It is because when the most advanced phono stage is put before him and allows him to hear all the subtleties of the instrument, the intricacies of the musician's techniques and the mastery in the reading, it moves the listener in ways that no lesser systems can. He can spend more and travel to all corners of the Earth and then back, and he will still have not experienced the exultation of the soul as only a mastery performance of a work as presented and realized by the best in home audio. I consider myself blessed to have experienced some of that. After listening to it, I reckon the XS is the only way to experience vinyl. Finally, Kent English, the International Sales Director of Pass Laboratories, offered the following:

"Wayne designs circuits such that he gets the best performance metrics and greatest number of smiles under the widest set of circumstances in terms of what he's doing...and isn't that really the grail. As long as audio is a mix and match hobby, we find it prudent to go out of our way to build product that works well with the widest possible spread of other makers' equipment, in "our-world" and for our "end-user;" [and] "play well with others". In stark contrast to that you recall the Pass Labs Rushmore 5-way active speaker. Rushmore was the product Nelson and I wanted and Joe shaped to what he saw as a viable product. Really, a very nice system, speakers and amps and front end's all matched as a set. If you just wanted to enjoy music, the Rushmore was a very good window to the music, but if you wanted to play with wires, play with amplifiers, play with crossovers, the Rushmore was an anathema to your goals. And so it goes, too, with phono. If a maker could match arm to table, cartridge to arm, wire to cartridge, head amp to the whole assembly...right up to matching listener in the room, then some tasks would become much easier. We have neither will nor luxury to make that happen. And even if we did, and I don't believe that's a lofty goal, high end audio is not "cookie-cutter", there isn't one best, or one path."

Again, per Wayne Colburn: "Forty five thousand dollars for a phono stage? Yes and if you can't write the check don't listen to it there is no going back and you can't unremember the sound. It is XS and it isn't for everybody we sell a great one for less than one-tenth this price."